**Lesson Plan**

**Topic: Light Unit** Tienna Francisco

**Activity: Light helps plants grow** Grade Level: Pre-K

**OBJECTIVE:** Children will understand that lights help plants grow.

**Essential Question:** How and why do we use different kinds of light?

**Focus Question:** How does light help us?

**Vocabulary words:** dark, grow, heat, light

**PROCEDURE**:

**Beginning:** (Large Group 7-10 minutes) Show children a plant, ideally a live plant but if necessary a picture of a plant. Tell the children the plant is alive and that plants grow. Ask children what they think plants need in order to grow. Guide the discussion making sure to note that plants need light to grow.

**Middle:** (Small Group 15-20 minutes) Tell children they are going to plant a seed. Have children scoop soil with their hands into a small pot. They can count each scoop as they fill their pots. Show the children the variety of seeds and what they are. Discuss how to plant a seed. Allow children to choose and plant their seeds, assist as necessary. Have children write their names to label their pots. Determine two places for children to store their plants; one in the dark and one in the light. Invite children to consider the both options and decide where they would like to place their plant. Allow children to put their plants in the appropriate space per their decision.

**End**: (Large Group 7-10 minutes): Store the children’s plants in the designated areas for a period of time. Invite children to monitor the plants periodically and water them. Have children draw what they observe to see if there is change or growth. At the conclusion of the experiment, graph the results. Create a graph with the columns light and dark and tally how many plants grew in the dark place and how many plants grew in the light place.

**Alternative to soil:** If potting soil is not available, seeds can be grown in a transparent plastic glove or small plastic baggie. Place a wet cotton ball in the finger of a glove, add a seed and hang up the glove. The plants will also need to be watered. Check labels on soil mixtures to ensure the soil is safe for children. Be sure children wash their hands after handling soil and planting seeds.

**Differentiation**:

For children who need additional support: Take pictures of the plants a few times throughout the experiment. Create a chart or book to solidify the learning. For example, repeat directions, extend time, adapt materials, preview questions, and provide 1:1 support.

For children who are ready for a challenge: Increase the complexity of the experiment by choosing some plants to water more, and some less. Keep track of the amount of water given to each plant and record the results on the plants’ growth.

**Assessment/Rubric:**  Does the child understand that plants need light to grow? What evidence is there to support this understanding? Evidence of children during lesson time will be noted to show they are proficient in the specific area of learning.

**Teacher’s reflection:** What went well? Why? What will I do differently given what I have learned from observing children during this activity? Which children needed differentiation during this activity and how will I meet their needs moving forward?

**Student Checklist for Small Group Assessment**

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| --- | --- | --- | --- |
| Child’s Name: | Understands that plants need light | Evidence of understanding | Notes: |
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**New York State Prekindergarten Foundation for the Common Core Standards**

PK.Domain 2- Uses senses to assistant and guide learning.

PK.Domain 4-Demonstrates a growing receptive vocabulary.

PK.Domain 4-Demonstrates a growing expressive vocabulary.

PK.Domain 4- With guidance and support, participate in collaborative conversations with diverse partners about pre-kindergarten topics and texts with peers and adults in small and large groups.

PK.Domain 5- Asks questions and makes predictions based on observations and manipulation of things and events in the environment

PK.Domain 5-Uses senses to gather, explore, and interpret information.

PK.Domain 5-Observes and describes characteristics of living things.

**Standards Professional Development for Teachers**

1c. Professional development design is grounded in the New York State Learning Standards and student learning goals.

2d. Professional development provides differentiated instructional strategies to meet the needs of diverse learners.

3a. Professional development is based on current research in teaching, learning, and leadership.

5a. Professional development focuses on developing educators’ knowledge of the learning styles, needs, and abilities of their students, as well as the diverse cultural, linguistic, and experiential resources that their students bring to the classroom.

5c. Professional development provides opportunities for educators to examine their practice in setting and maintaining high expectations for all students to enable them to attain high levels of achievement.